

# adaTECH CMDO

The adaTECH CMDO is a distribution automation device for monitoring and tele-controlling of Load Break Switch (LBS).



## APPLICATIONS

- > Remote Terminal Unit (RTU).
- > Medium Voltage Monitoring:
  - > Directional fault passage detection.
  - > Automatic fault isolation, or automatic switch.
  - > Instantaneous current and voltage measurement.
- > Switchgear status monitoring.
- > Alarms management (fire, floods, battery status, etc.).

## MAIN FEATURES

- > 1 line. Up to 3 (LPVT), 4 (LPCT) according to IEC 61869-11 and IEC 61869-10.
- > Control and supervision of switchgear and feeder status:
  - > Switch commands.
  - > Remote and local operation.
  - > Directional earth fault detection.
  - > Fault isolation.
  - > Voltage presence and absence.
  - > Voltage, current and power measurement.
  - > Oscillographic fault recording.
- > Friendly local HMI design, allowing command execution and easy viewing of status and alarms.
- > Communication protocols under IEC 60870-5-104 or DNP3 (if requested).
- > Web server for data display and remote device management.
- > Web Services for automated information exchange and automated remote management, compatible with SOAP 1.2 and WSDL 1.1.
- > Users management under LDAP and LDAPS, for access credential validation, compatible with OpenLDAP 2.4x.
- > Cybersecurity features.

## TECHNICAL SPECIFICATIONS

### Technical Characteristics

Power supply	Voltage range	48, 24 or 12 Vdc (+30%, -20%)	
	Digital input voltage range	48, 24 or 12 Vdc (+30%, -20%)	
	1 Line	< 6 W	
Power Consumption	Consumption measurement made with the following disposal: <ul style="list-style-type: none"> <li>&gt; Energized relay</li> <li>&gt; Equipment in communication</li> <li>&gt; All functions working (measurement In and Un)</li> </ul>		
Accuracy	Current input	Ratio error	± 0.2 %
		Phase	10´
	Between -10°C and +60°C		
	Voltage input	Ratio error	± 0.2%
Between -10°C and +60°C			
Current settings	22,5mV, 150mV or 225mV		
Voltage settings	3,25/√3		
Communication interface	2 Ethernet Ports 10/100 BASE-T: DNP3.0 , IEC 60870-5-104 1 USB Port		
Digital inputs	Up to 28 digital inputs		
Digital Outputs	Up to 6 digital outputs		

## Functional characteristics

These devices present the following features:

SCADA communications protocol	IEC 60870-5-104 or DNP3 (if requested) protocols
Remote access through HTTP and HTTPS	Single line diagram with measurements, alarms status and position information
	Displays measurements, events and settings
	Configurable settings
	Oscillographic fault record
	Events and switching operations record
	FW and configuration version history
	Load configuration through XML file
	SNTP synchronization
Cybersecurity	IEEE1686, IEC 62351
	RBAC
	SSH
	Audit trail
	HTTPS
	Port and users management
Web Services. Information exchange and remote management systems, compatible with SOAP 1.2 and WSDL 1.1, such as:	Configuration status
	Remote configuration modification
	Remote events file
	Remote software load
	First configuration setting
	Instant report on any issue
	Completed software and firmware load
	Fault detection (Phase fault/ Earth fault)
Fault detection	Fault isolation algorithm
Measurement	<b>Current</b>
	IEC 61869 compliance
	True RMS & Phase Angle(Deg) L1: Ia, Ib, Ic, IO
	Accuracy 0.2%
	Reading range $1\%I_n < I < 120\%I_n$
	<b>Voltage</b>
	IEC 61869 compliance
	True RMS & Phase Angle (Deg) L1: Va, Vb, Vc
Accuracy 0.2%	
Reading Range $0,1U_n < V < 2U_n$	
Power (kVA, kW) & Energy (kWh, kWh)	
Power factor	
Frequency : 45 – 65 Hz	

### Functional characteristics

Control	Control Position: Local / Remote
	Switch Control: Open/Close
	Fault Indication, Manual, Reset
Status Monitoring	Switch Status: Open/Closed
	Control Position: Local/Remote
	Fault Indication: A/B/C/N/SEF/Reverse Dir.
	System Error (Self Diagnosis Result)
Recording	Over 3500 Events (I/O, Functional, System, Fault)
	Oscillography (more than 25 registers)
	Audit trail (2048 events)

### DIMENSIONS

